Newington-Dover EIS
NH 16 / US 4 / Spaulding Turnpike
NHS-027-1(37), 11238

WELCOME

Public Informational Meeting

Dover City Hall – November 7, 2005

Newington Town Hall – November 9, 2005

Meeting Agenda

- Introduction (5 minutes)
- Project Purpose and Need (5 minutes)
- Project Process and Schedule (5 minutes)
- Project Background (10 minutes)
  - Brief Question & Answer Period (5 minutes)
- Suggested Preferred Alternative (25 minutes)
  - Brief Question & Answer Period (10 minutes)
- Noise Evaluation & Noise Mitigation (10 minutes)
  - Brief Question & Answer Period (5 minutes)
- Potential Wetland Impacts & Wetland Mitigation (10 minutes)
- Public Comment Period

Project Purpose

- Reduce Safety Problems
- Improve Transportation Efficiency

Project Need

- Spaulding Turnpike
  - Major Limited Access Highway
  - Links Seacoast Region w/ I-95, Concord, Lakes Region, and White Mountains
  - National Highway System (NHS)
  - Principal Arterial
  - Major Commuter Route
  - Major Freight Corridor
  - Major Tourist Route

Project Need (con't)

- Spaulding Turnpike
  - Traffic Volumes
    - 30,000 (1980)
    - 70,650 (2003)
    - Projected 94,300 (2025)
  - Level of Service F
  - Geometric Deficiencies
    - Substandard Shoulders on Little Bay Bridges
    - Substandard Merge, Diverge, and Weave Areas
  - Accident Data – Long Delays

Project Need (con't)

- Spaulding Turnpike
  - Bisects Residential/Recreational/Commercial Areas
  - Local Connectivity – motorists, pedestrians, bicyclists

Project Need (con't)

- Spaulding Turnpike
  - Seismic Performance Category B
  - Little Bay Bridges – major structures

Project Need (con't)

- Spaulding Turnpike
  - State Ten-Year Transportation Improvement Program
  - Top Long-Term Transportation Priority (Seacoast MPO)
  - Development & Traffic Growth ⬆
  - Traffic Operations & Safety ⬇
    - Resulting Increased Delays, Increased Accidents, Potential Loss of Commerce

Project Phases

- Preliminary Design & Environmental Evaluation
- Environment Impact Statement (EIS) Framework
- 5 Phases of EIS Process
  - Phase 1 - Project Scoping / Data Collection / Issue Identification
  - Phase 2 – Conceptual Alternatives Development & Screening
  - Phase 3 – Preliminary Design / Impact Assesssment / Draft EIS
  - Phase 4 – Public Hearing
  - Phase 5 – Final EIS

PROJECT SCHEDULE

- Phase 1: March 2004
- Phase 2: January 2005
- Phase 3: January 2005 - February 2006
- Phase 4: May 2006 Public Hearing
- Phase 5: September 2006 - June 2007
- FHWA Record of Decision: June 2007
- Final Design: June 2007 – January 2009
- Construction: October 2008 - October 2014

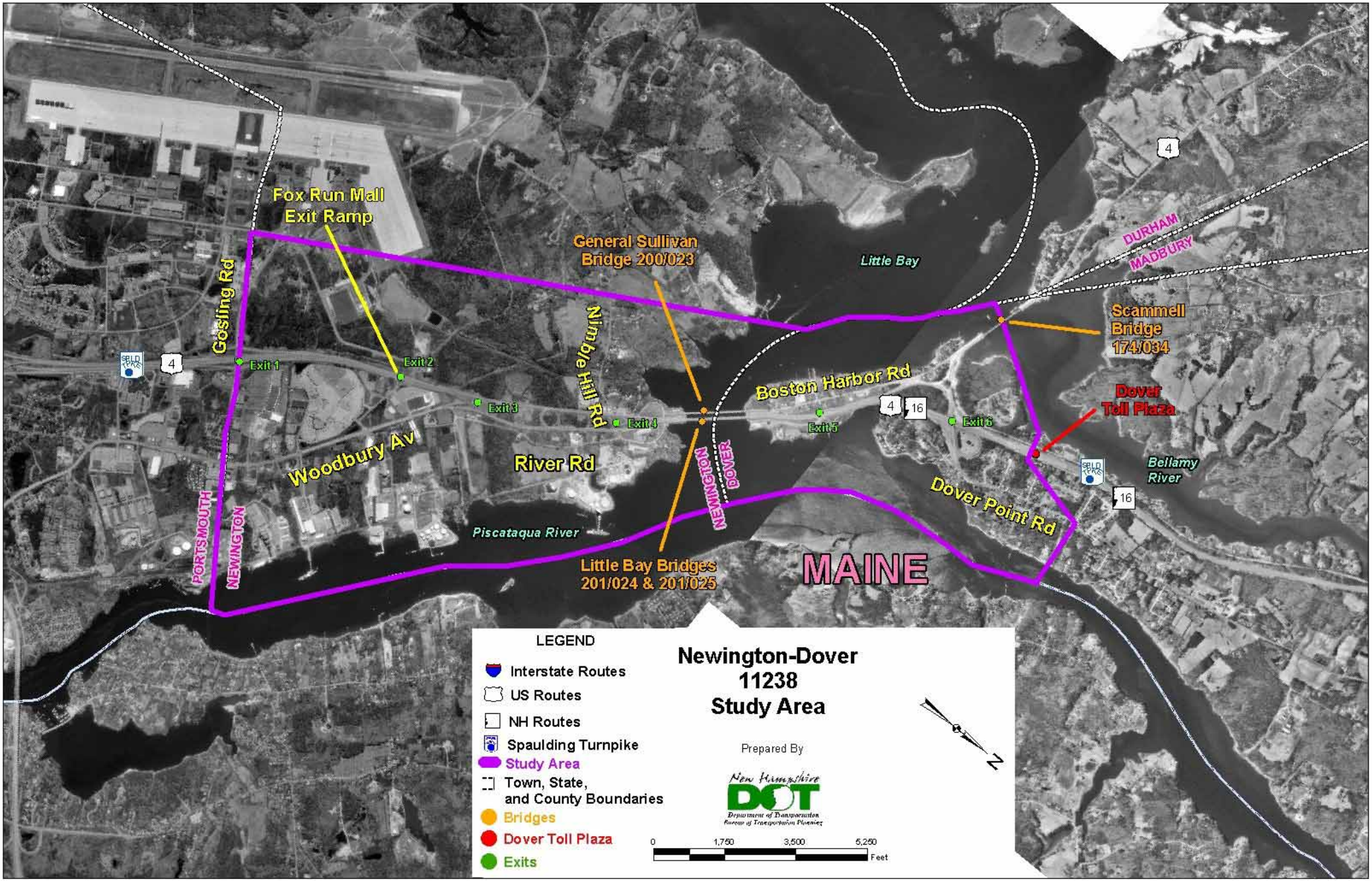
Public Participation

- Advisory Task Force
- Public Informational Meetings
- Resource Agency Meetings
- www.newington-dover.com
- Public Hearing

Project Background

- Study Area
- Existing Conditions and Constraints
- Existing Corridor Deficiencies
- Preliminary Bridge Investigations

Project Study Area



Exit 2 – Exit 3

Exit 4N

Exit 4, Nimble Hill Road

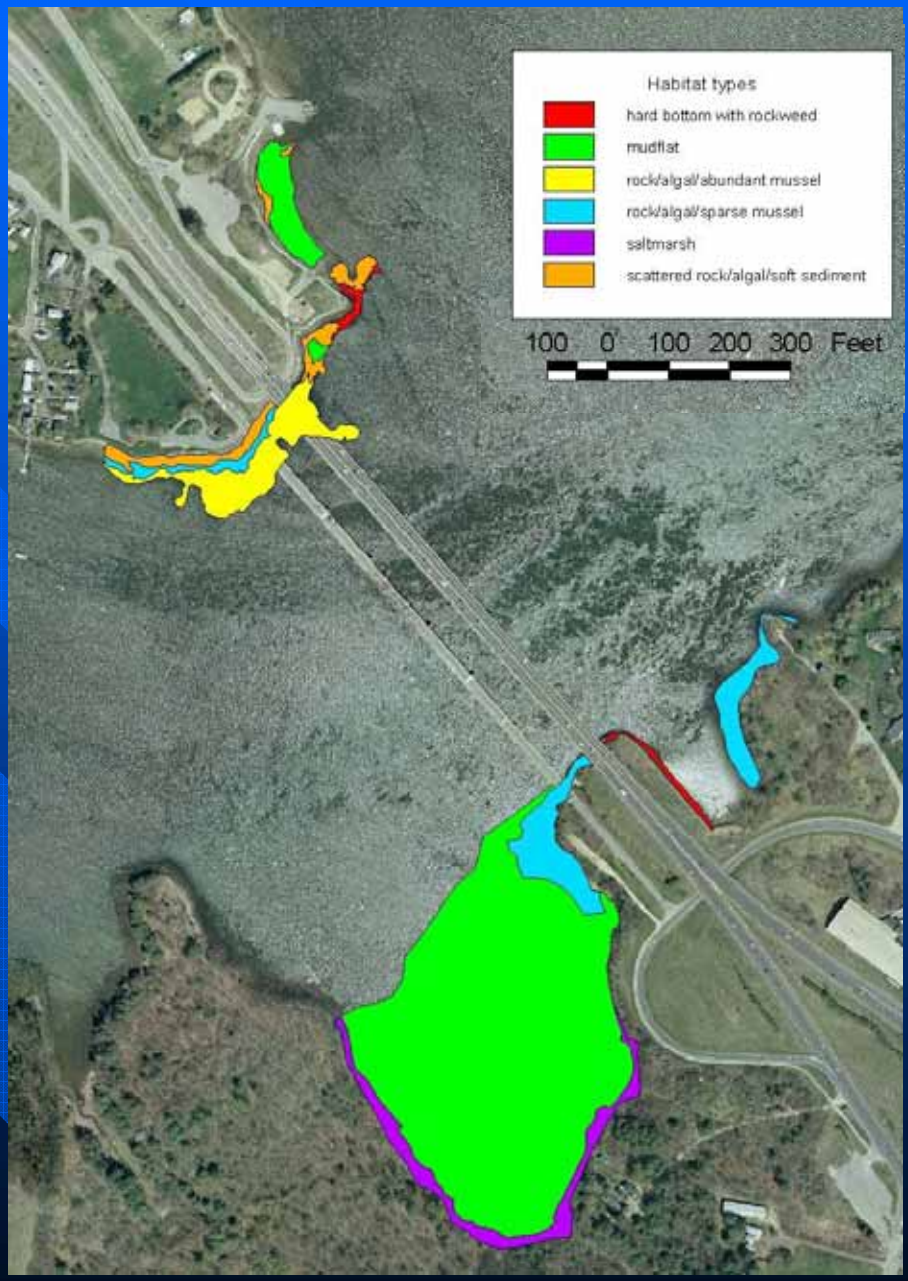
Hilton Park

Exit 6

Sensitive Environmental Resources

Great Bay Estuary & Associated Natural Resources

- Marine Habitat
- Coastal & Freshwater Wetlands
- Wildlife Habitat
- Threatened & Endangered Species
- Water Quality
- Floodplains



Air Quality

- Strafford & Rockingham County in “serious” non-attainment for ozone
- Analyze carbon monoxide & ozone precursors (VOCs & NOx)
- Microscale modeling at critical locations (e.g. interchanges & intersections)
- Review results against State Implementation Plan

Noise

- Identified 14 noise sensitive areas
- Monitor existing noise and traffic levels (completed in October 2003)
- Calibrate existing conditions model (TNM 2.0)
- Predict future traffic and noise levels
- Identify mitigation measures per FHWA guidelines

Socio-economic

- Direct:

  e.g., Property takings

- Indirect & Cumulative: e.g., Changes in growth patterns (REMI Model)

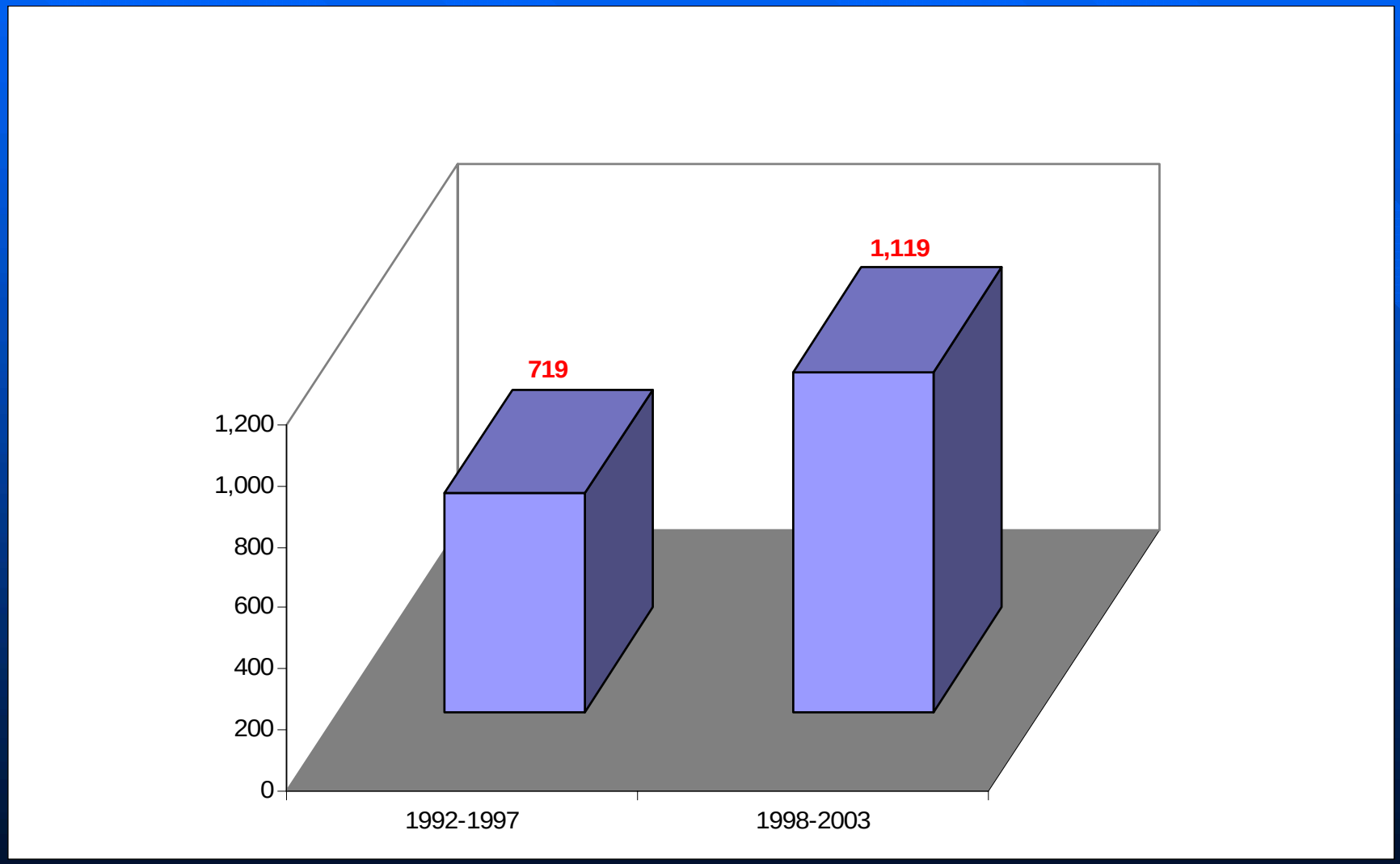
Hilton Park: Recreation & Historic Resources

Other Environmental Issues

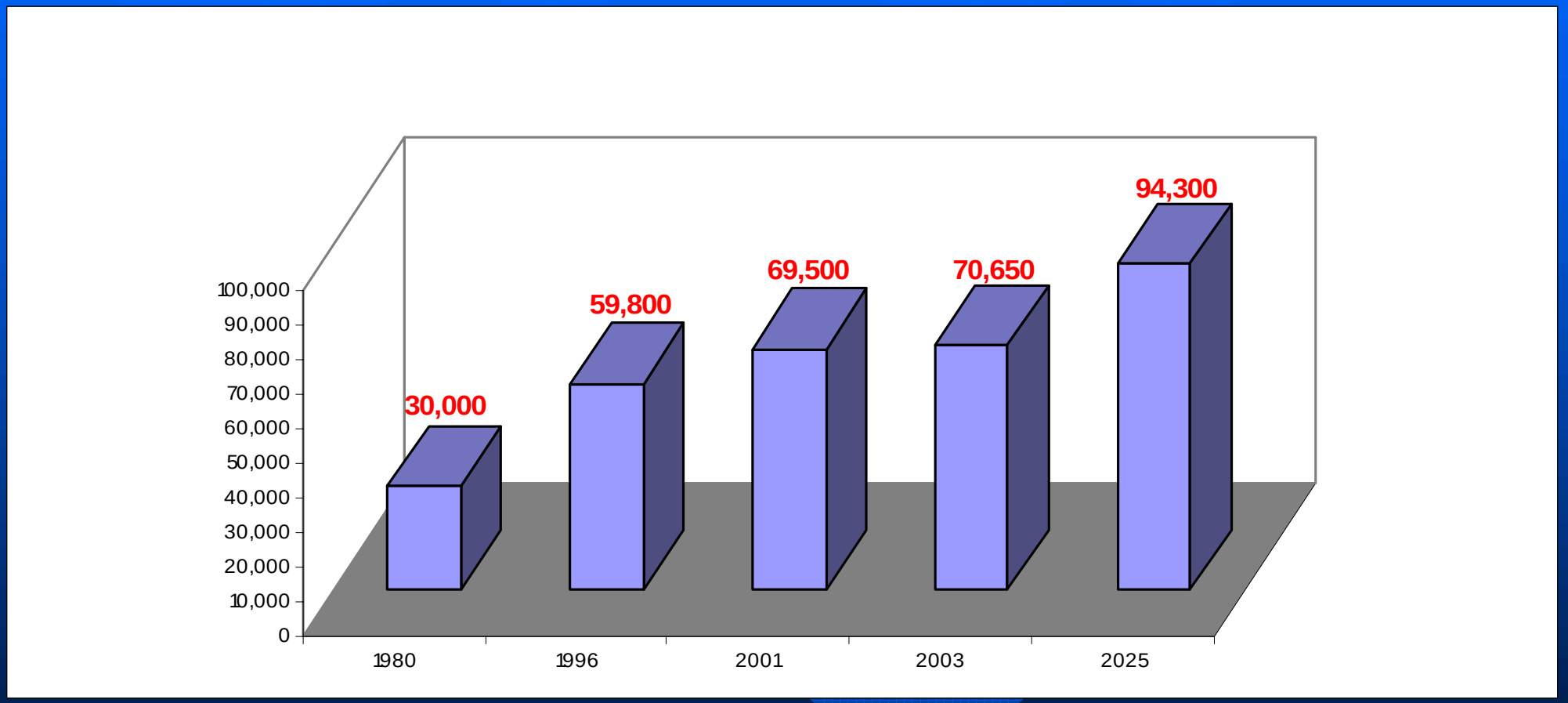
- Farmlands
- Hydrodynamics and Navigation
- Visual Resources
- Floodplains
- Groundwater
- Hazardous Materials

Scoping Report – March 2004

Number of Reported Study Area Accidents



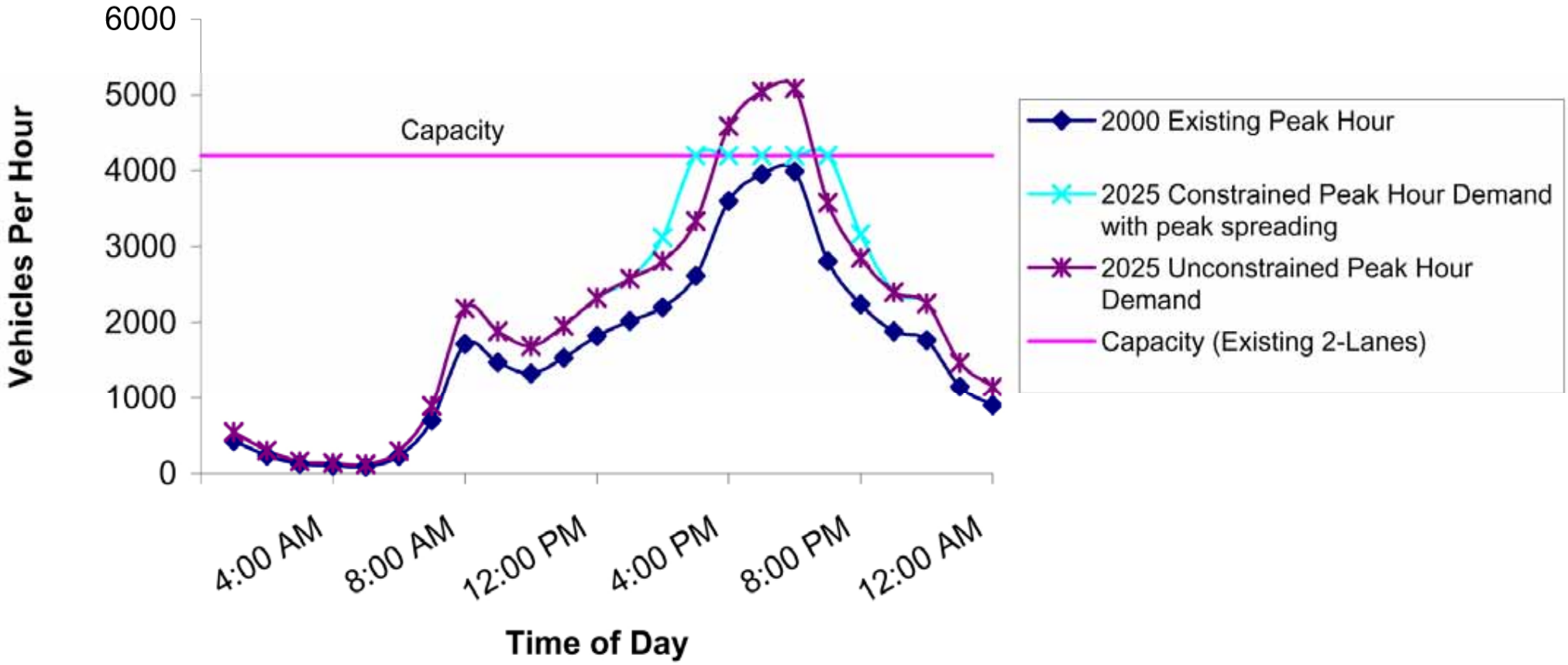
Little Bay Bridges
Average Daily Traffic Volumes



2003 6 10
8:37 AM

16 4:49PM

Temporal Distribution of 2000 and 2025 Average Weekday Traffic, Little Bay Bridges, Northbound



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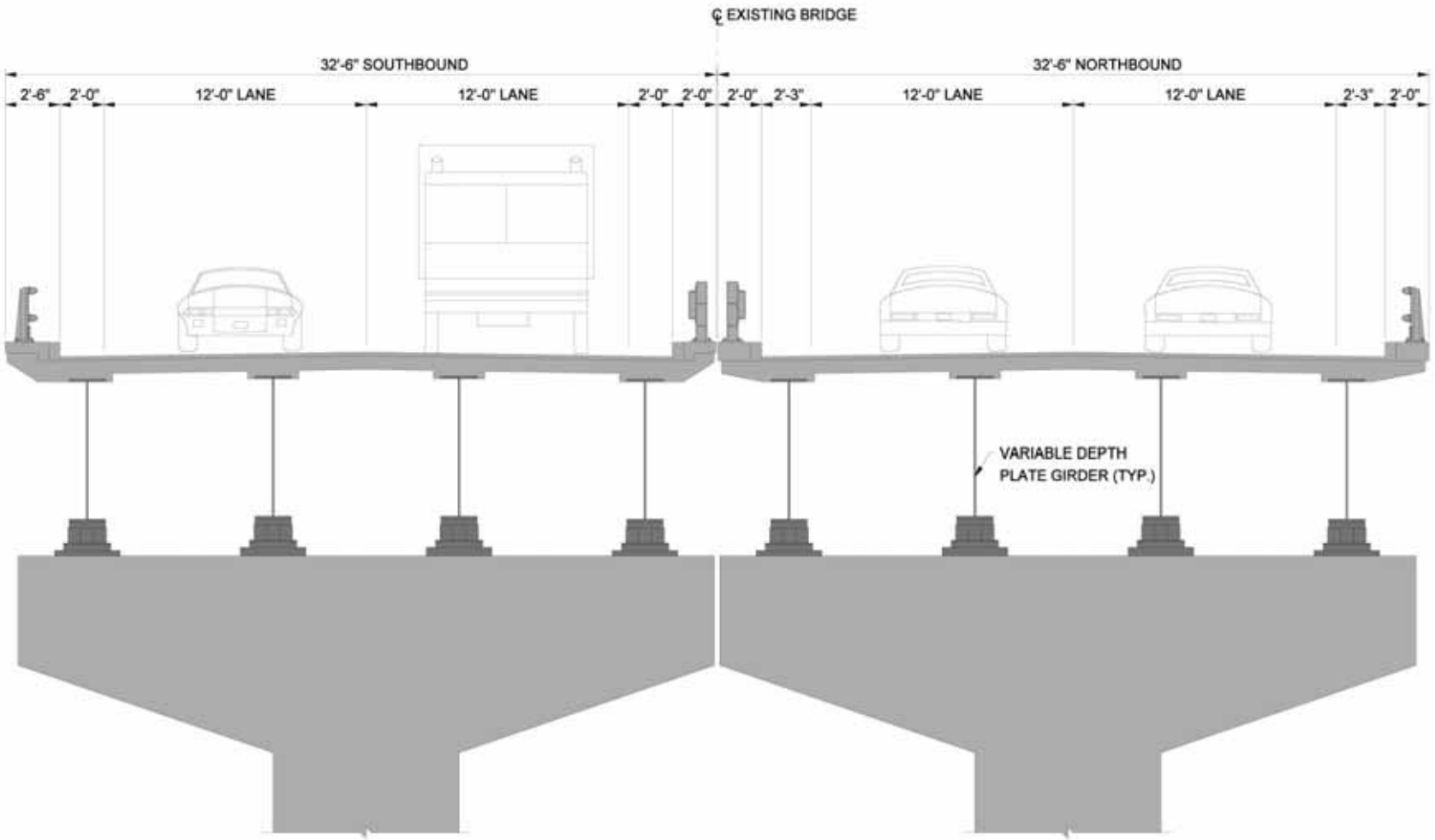
Preliminary Bridge Investigations



EXISTING TRANSVERSE SECTION

LITTLE BAY BRIDGES

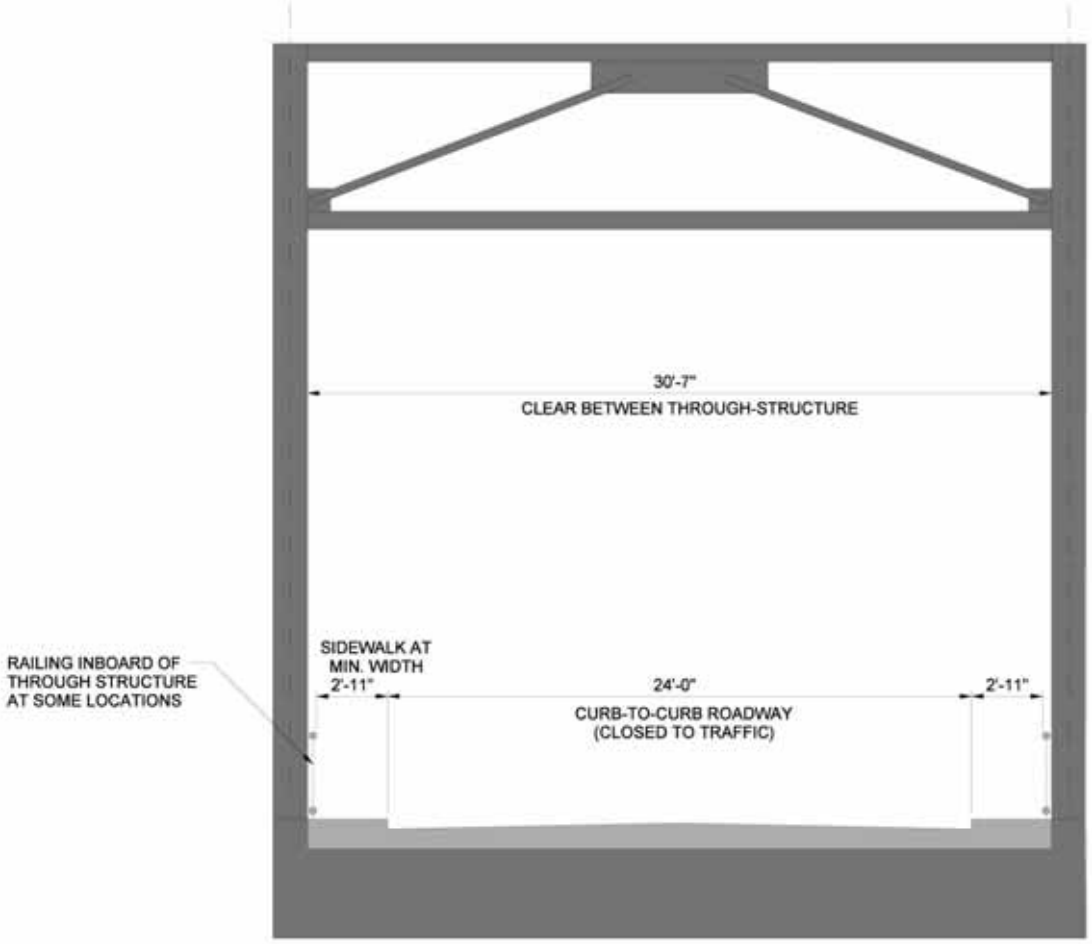
- LIMITED SIGHT DISTANCE (60 MPH DESIGN SPEED)
- SUBSTANDARD SHOULDER WIDTH
- MINOR DETERIORATION (GIRDER AND PIN-HANGER ASSEMBLY)
- SEISMIC VULNERALBILITY

0 2.5 5 Feet

Existing Little Bay Bridges

General Sullivan Bridge

FACTORS AFFECTING REHABILITATION



- GEOMETRY
  - LIMITED SIGHT DISTANCE (45MPH DESIGN SPEED)
  - LIMITED CROSS SECTION
- CONDITION / BRIDGE
  - MAJOR DETERIORATION OF DECK, GIRDER AND TRUSS MEMBERS
  - EXTENSIVE SUBSTRUCTURE DETERIORATION BELOW WATER LINE
- LOAD RATING
- FATIGUE AND LOW INTERNAL REDUNDANCY
- HISTORIC SIGNIFICANCE
- LEAD PAINT
- SEISMIC VULNERABILITY

EXISTING TRANSVERSE SECTION

GENERAL SULLIVAN BRIDGE

0 2.5 5 Feet

Existing General Sullivan Bridge

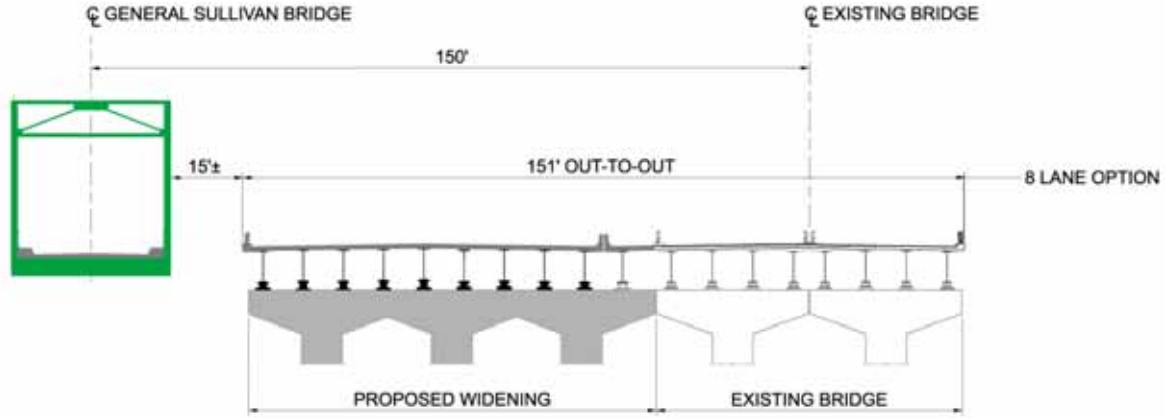
Alternatives Recommended for Further Study

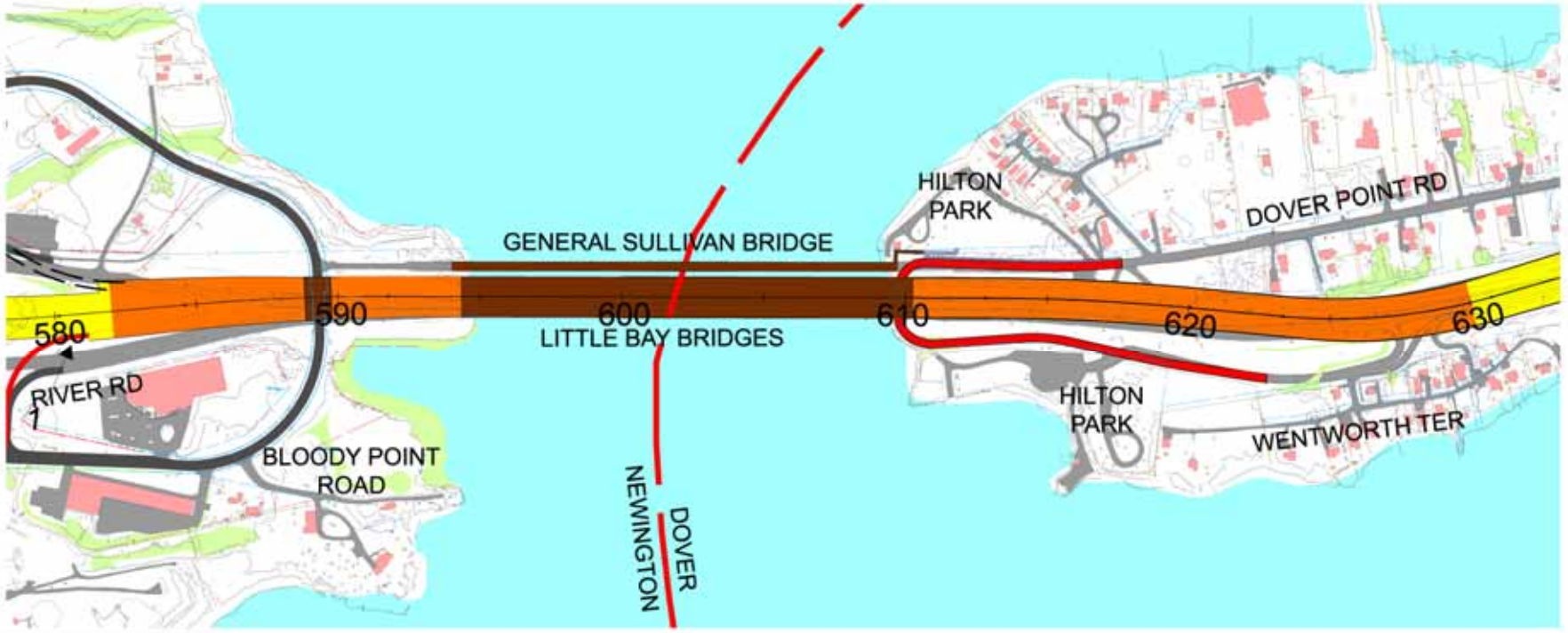
- No-Build
- Transportation System Management (TSM)
- Travel Demand Management (TDM)
- Bridge
- Roadway
- Combination of Above

Suggested Preferred Alternative

- Bridge Alternatives
  - Little Bay Bridges
  - General Sullivan Bridge
- Dover Alternative 3
- Newington Alternative 13
- TSM Recommendations
- TDM Recommendations

Conceptual Cross-Section
Widen to West Side





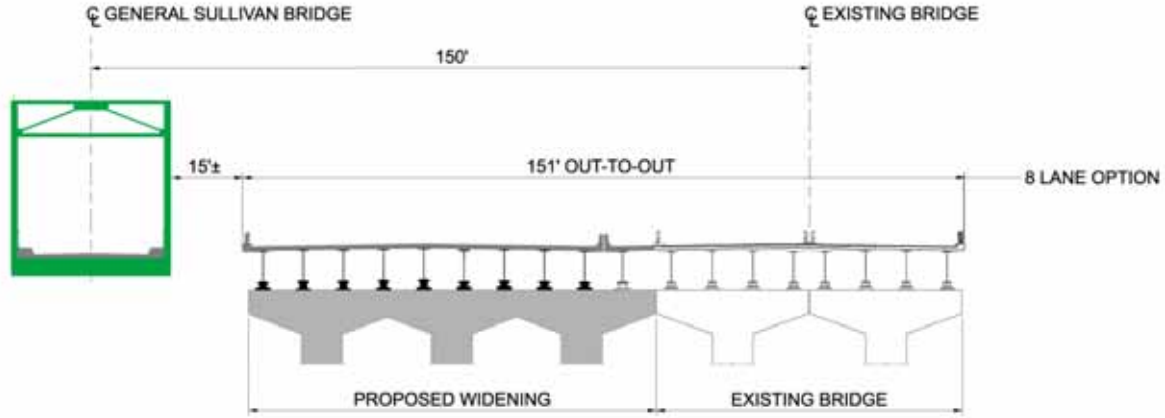
New Hampshire DOT
Department of Transportation

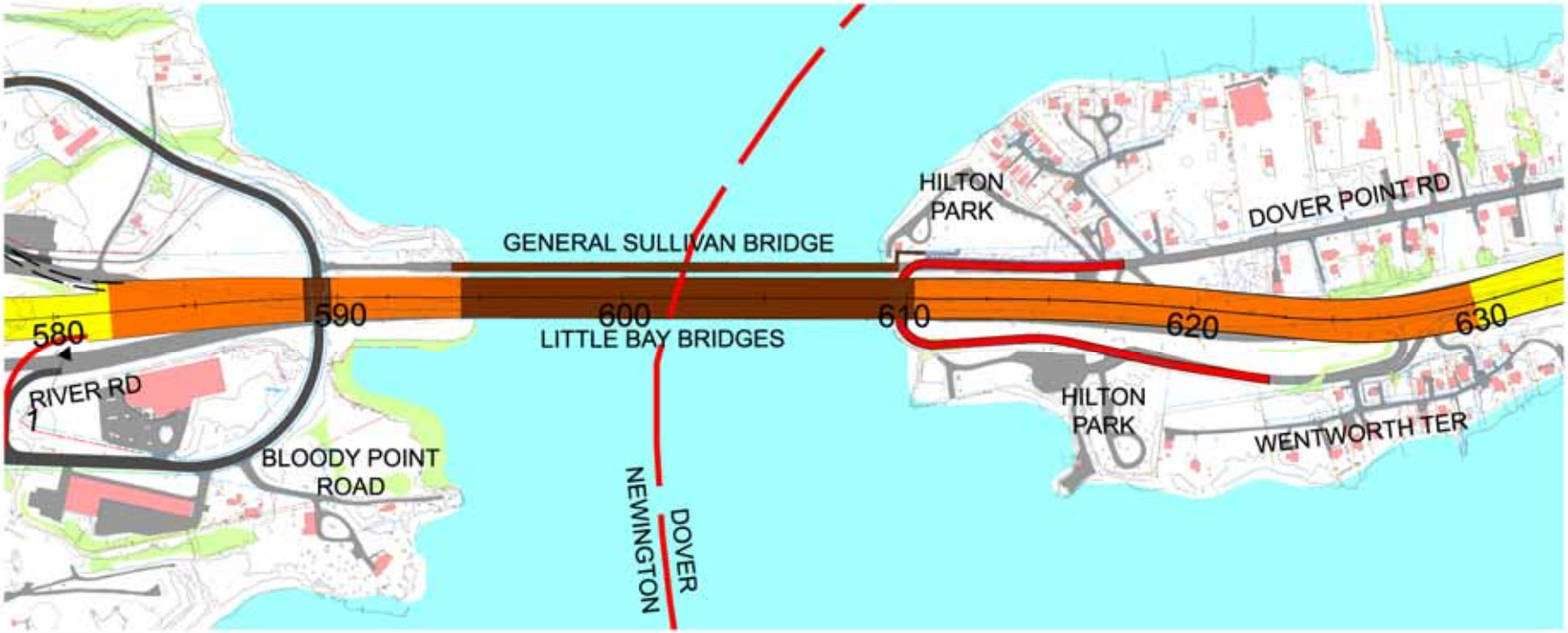
Legend:
- Existing Pavement
- Building
- Water
- Wetlands
- Conceptual Roadway Improvements
- 1 or 2 Lane Conceptual Roadway
- Proposed Bridge
- Newington Interim Improvements

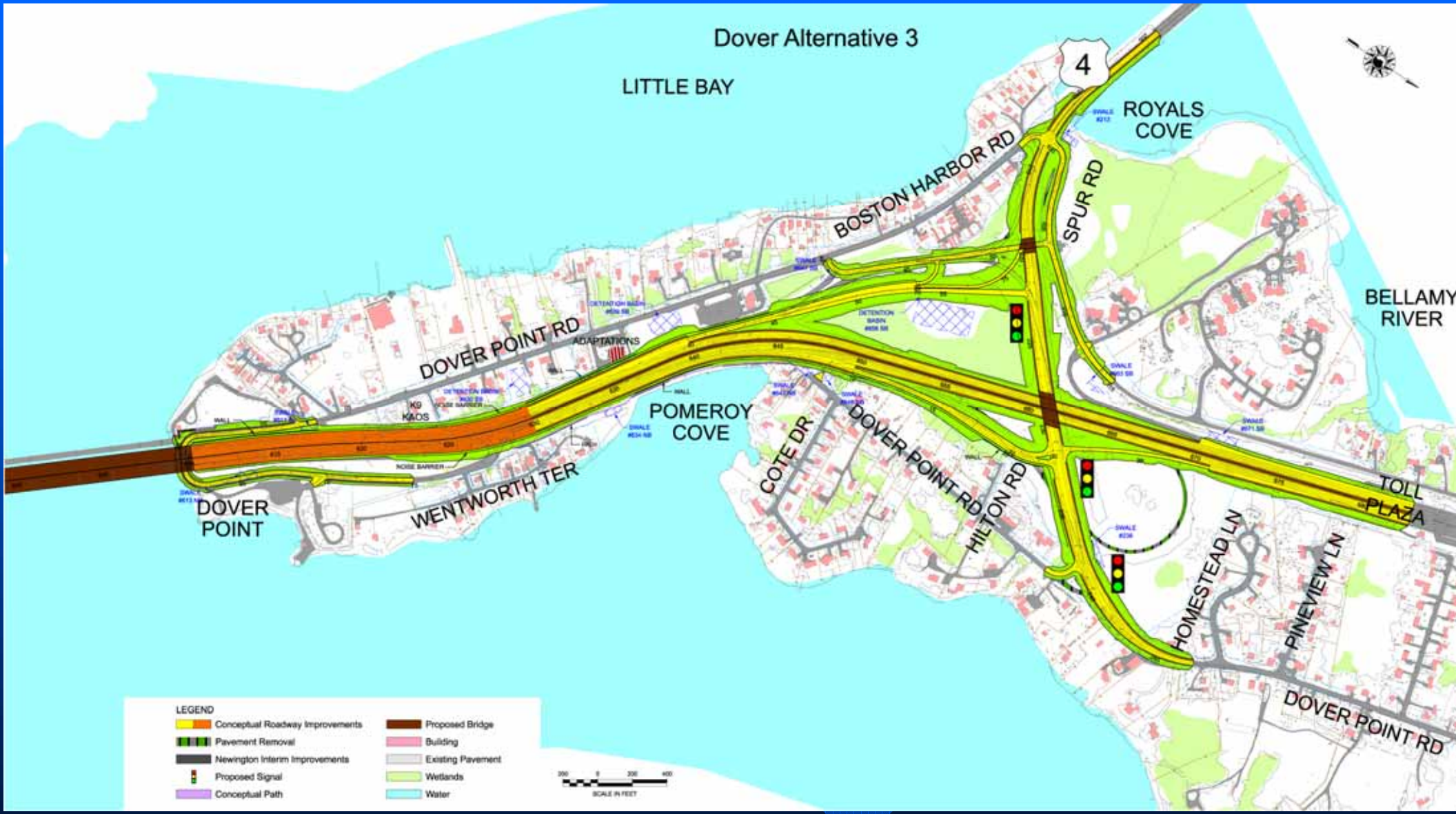
0 200 400 Feet

Hilton Park (Looking South)

Conceptual Cross-Section
Widen to West Side

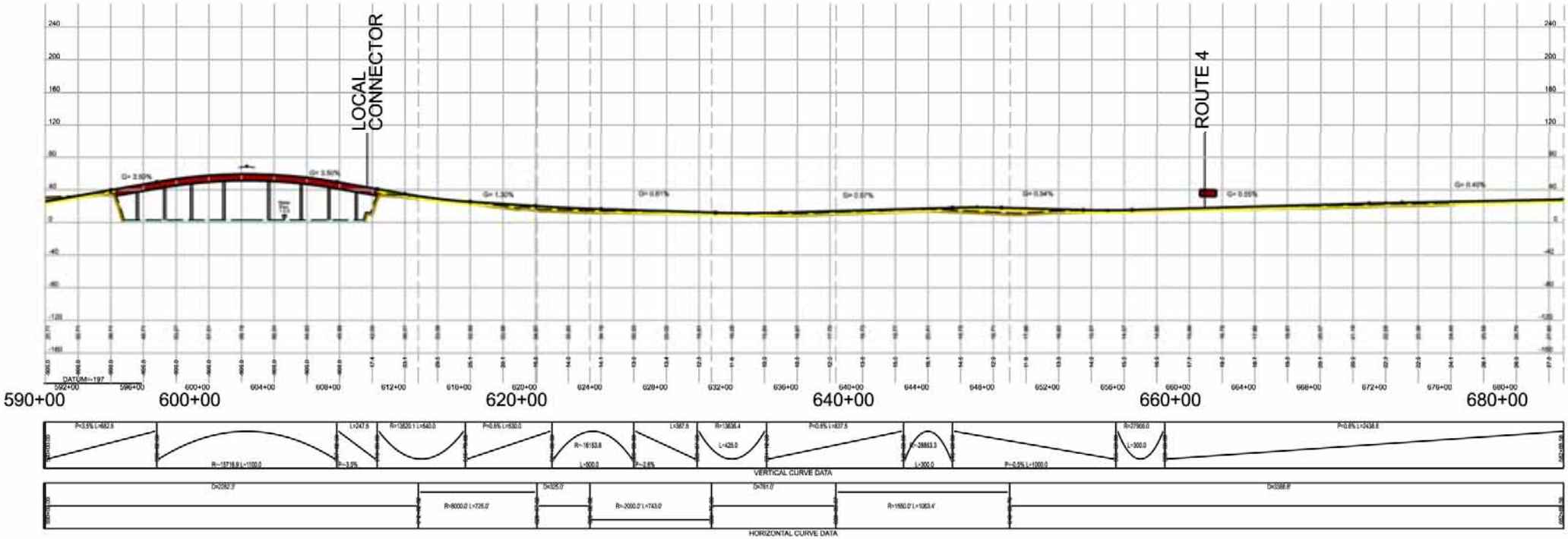




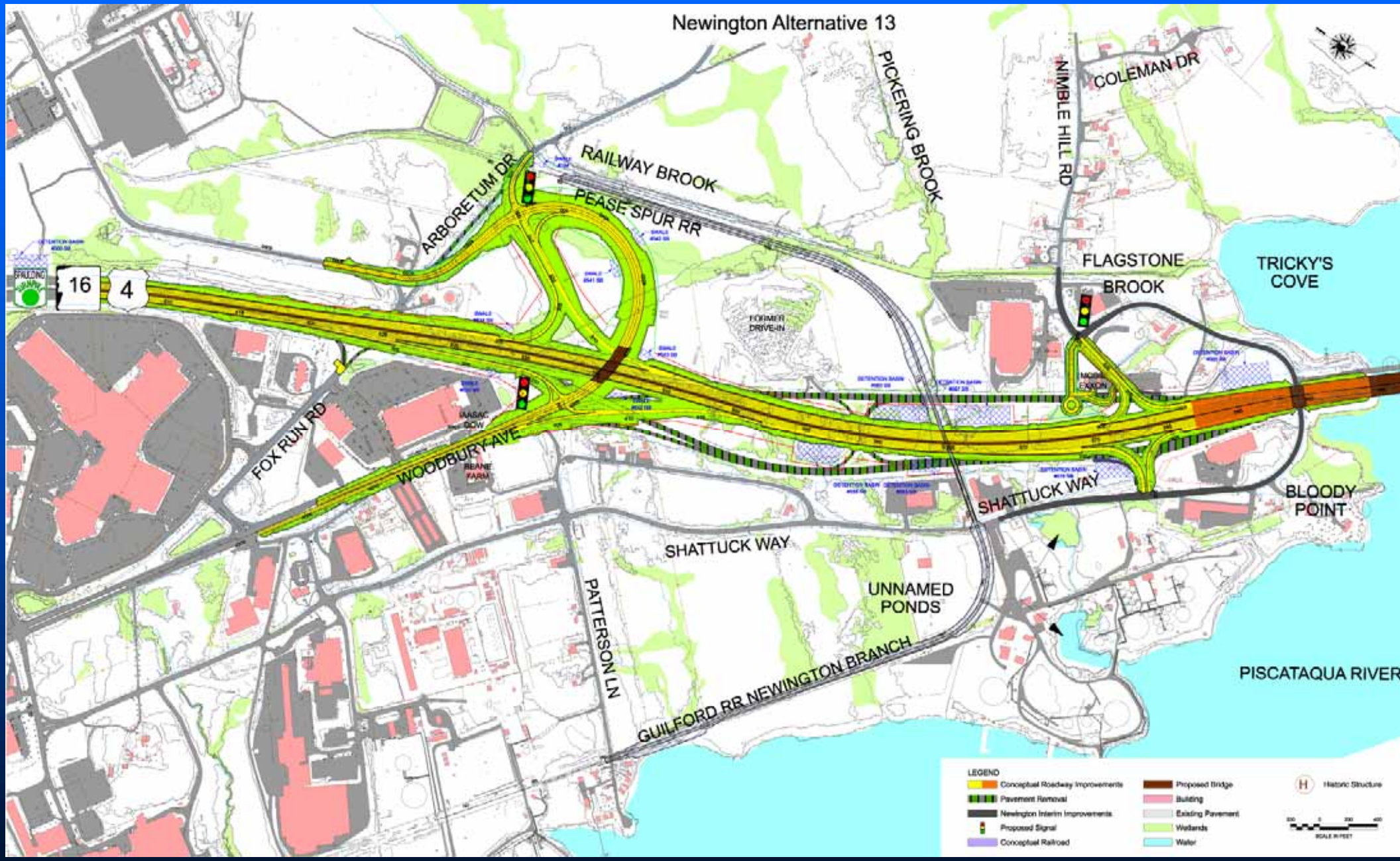

Dover Alternative 3
LITTLE BAY
4
ROYALS COVE
BOSTON HARBOR RD
SPUR RD
BELLAMY RIVER
DOVER POINT RD
ADAPTATIONS
K9 KAOS
POMEROY COVE
COTE DR
DOVER POINT RD
HILTON RD
TOLL PLAZA
DOVER POINT
WENTWORTH TER
HOMESTEAD LN
PINEVIEW LN
DOVER POINT RD
LEGEND
Conceptual Roadway Improvements
Pavement Removal
Newington Interim Improvements
Proposed Signal
Conceptual Path
Proposed Bridge
Building
Existing Pavement
Wetlands
Water
SCALE IN FEET

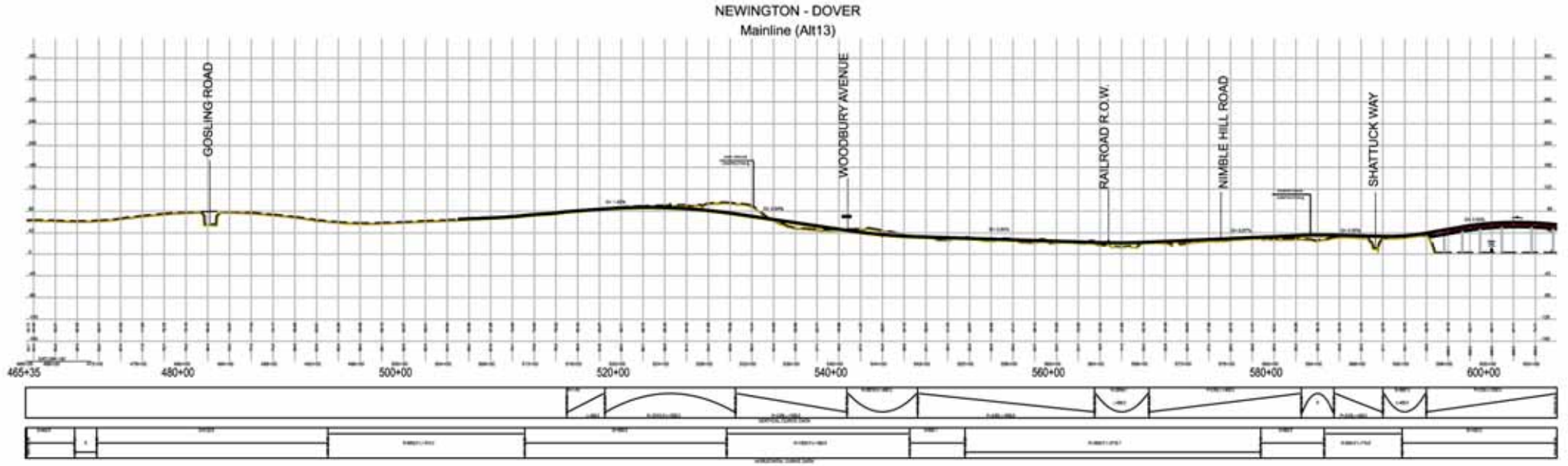
NEWINGTON - DOVER

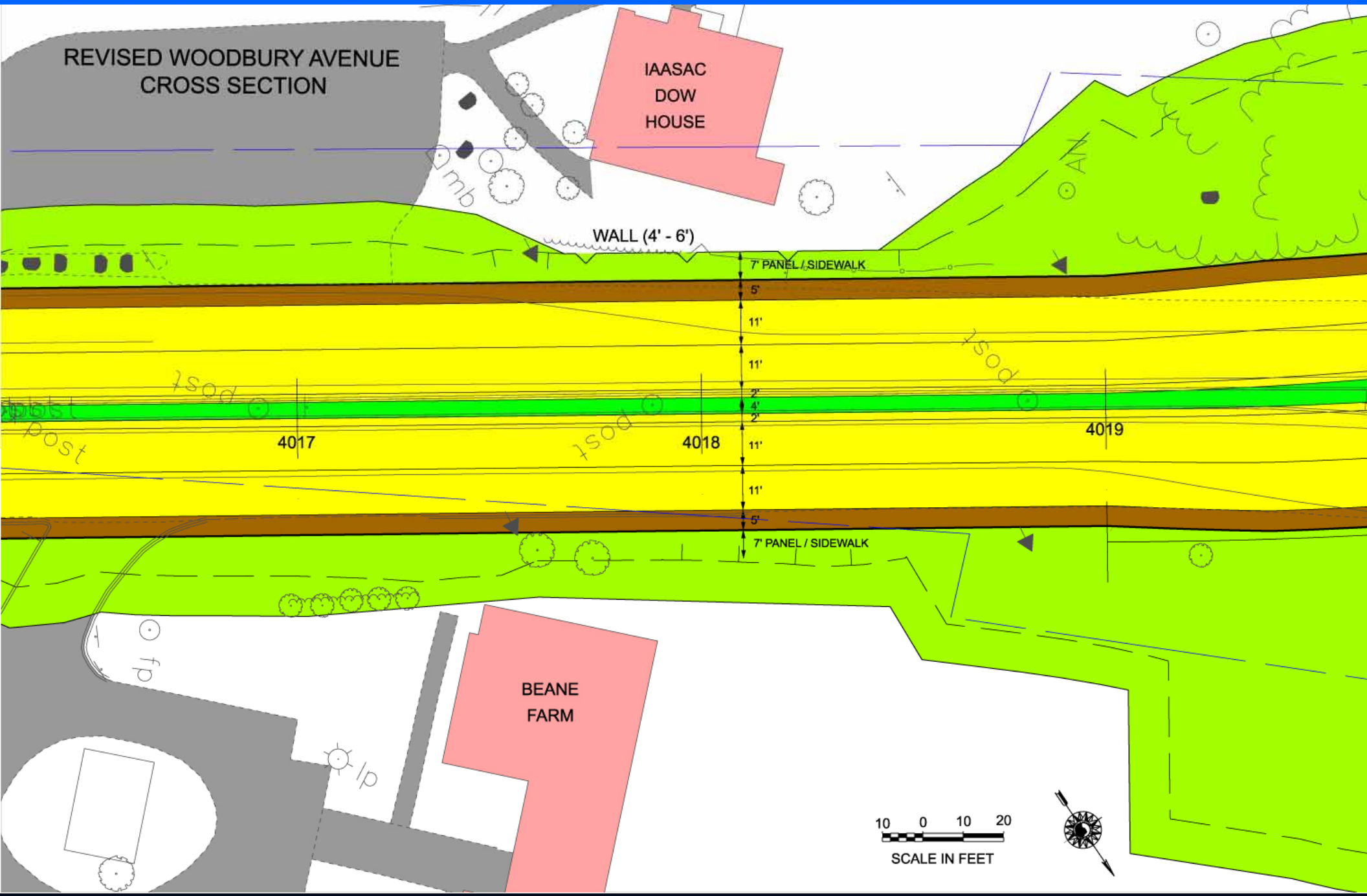
ALT 3 Mainline (Dover)



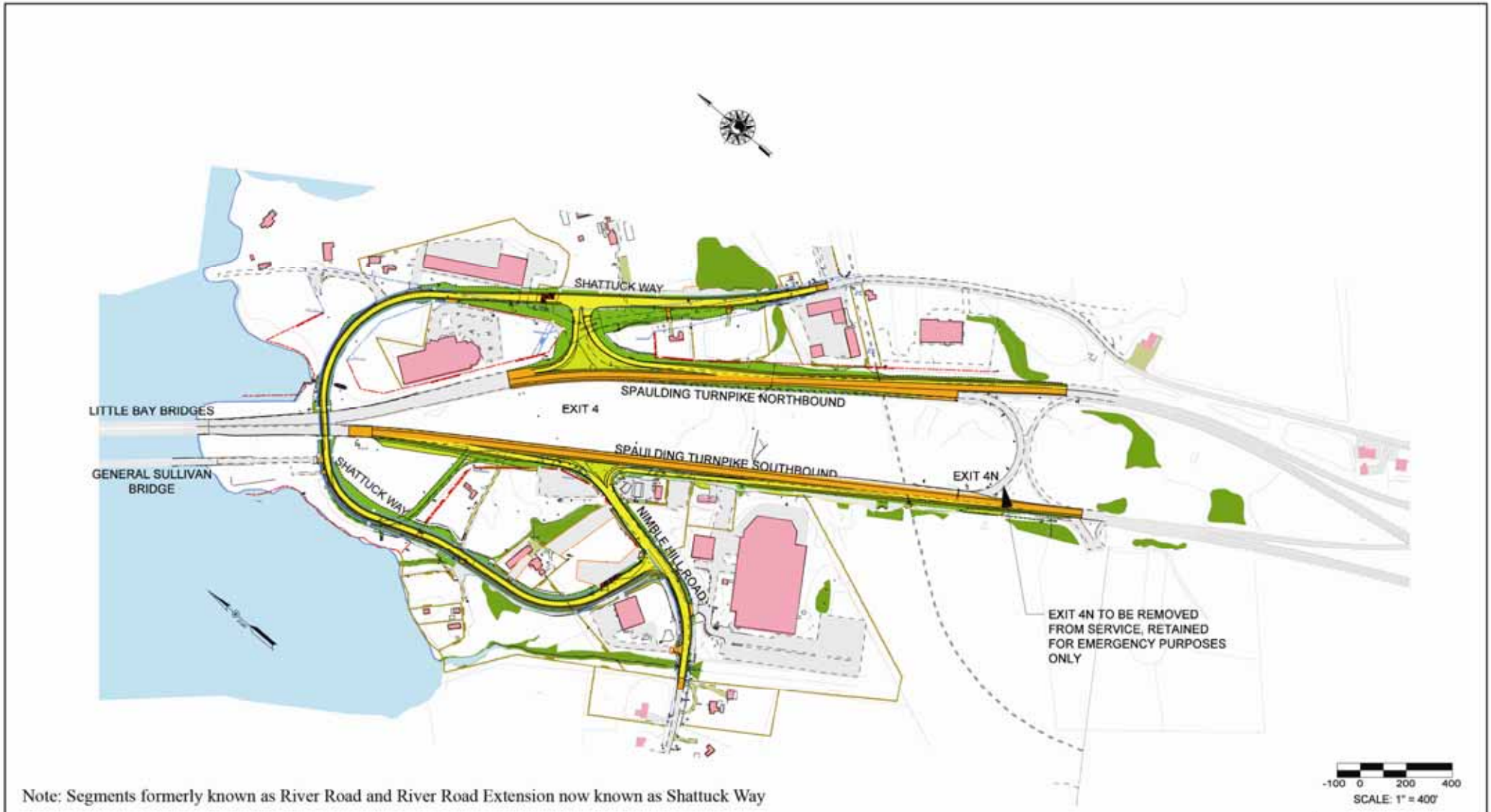
Hilton Park


Newington Alternative 13
PICKERING BROOK
NIMBLE HILL RD
COLEMAN DR
RAILWAY BROOK
ARBORETUM DR
PEASE SPUR RR
FLAGSTONE
BROOK
TRICKY'S
COVE
16
4
FORMER
DRIVE-IN
FOX RUN RD
WOODBURY AVE
SHATTUCK WAY
BLOODY
POINT
SHATTUCK WAY
UNNAMED
PONDS
PATTERSON LN
GUILFORD RR NEWINGTON BRANCH
PISCATAQUA RIVER
LEGEND
Conceptual Roadway Improvements
Pavement Removal
Newington Interim Improvements
Proposed Signal
Conceptual Railroad
Proposed Bridge
Building
Existing Pavement
Wetlands
Water
Historic Structure


NEWINGTON - DOVER
Mainline (Alt13)
GOSLING ROAD
WOODBURY AVENUE
RAILROAD R.O.W.
NIMBLE HILL ROAD
SHATTUCK WAY
465+35
480+00
500+00
520+00
540+00
560+00
580+00
600+00


REVISED WOODBURY AVENUE
CROSS SECTION
IAASAC
DOW
HOUSE
WALL (4' - 6')
7' PANEL / SIDEWALK
5'
11'
11'
2'
4'
2'
11'
11'
5'
7' PANEL / SIDEWALK
4017
4018
4019
tsod
tsod
tsod
post
BEANE
FARM
10 0 10 20
SCALE IN FEET

Interim Safety Improvement



Note: Segments formerly known as River Road and River Road Extension now known as Shattuck Way

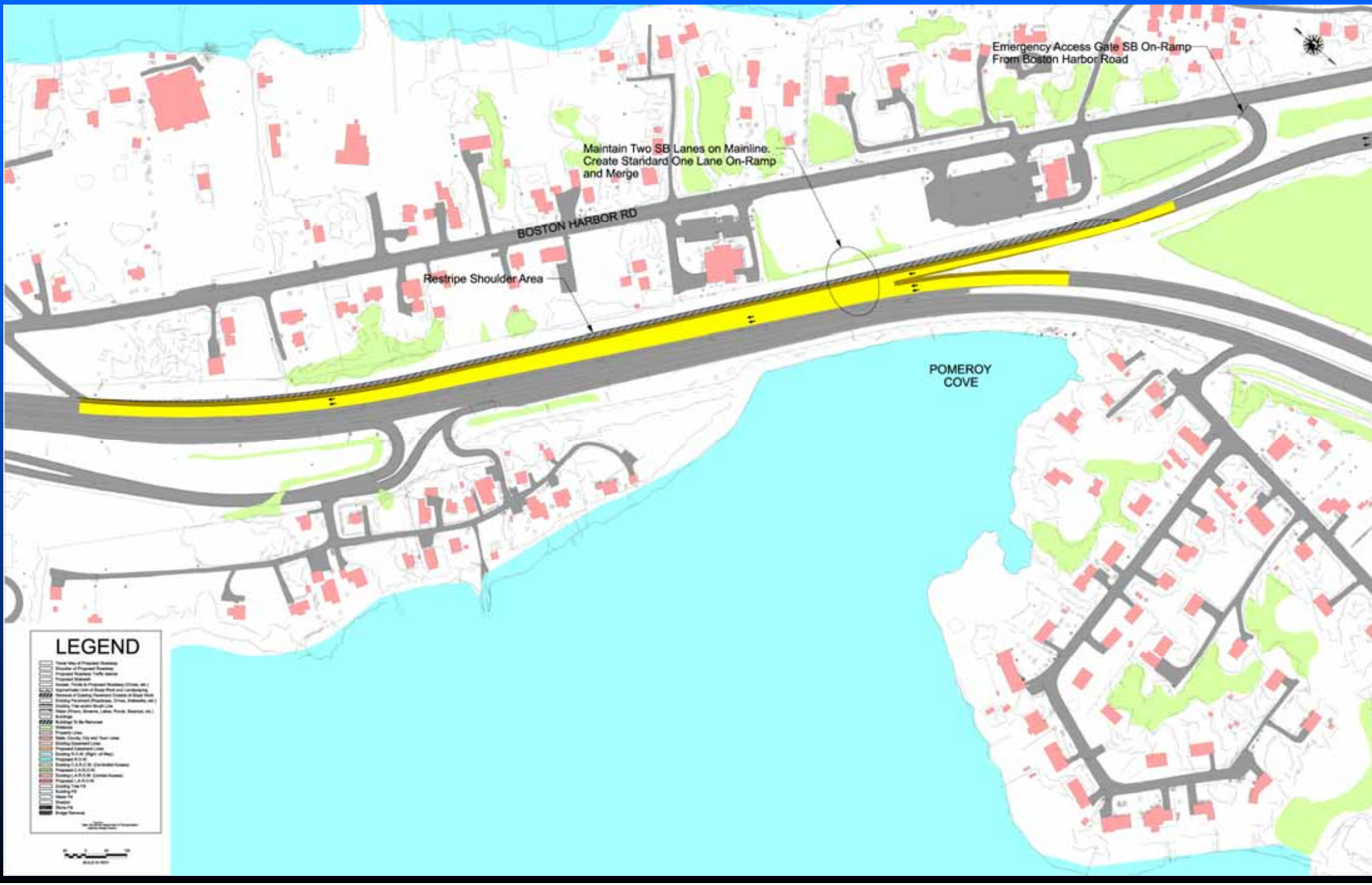
Proposed Work
Existing Pavement
Wetlands
Resurfacing / Driveway Improvements
Existing Buildings
Water
Buildings to be Removed
Pavement Removal

Interim Safety Improvements
Proposed Interchange Improvements
Exit 4 / River Road / Nimble Hill Road
Newington, New Hampshire
A000(115), 11238-C

New Hampshire DOT Department of Transportation

Figure 2.4-5

Dover TSM 2

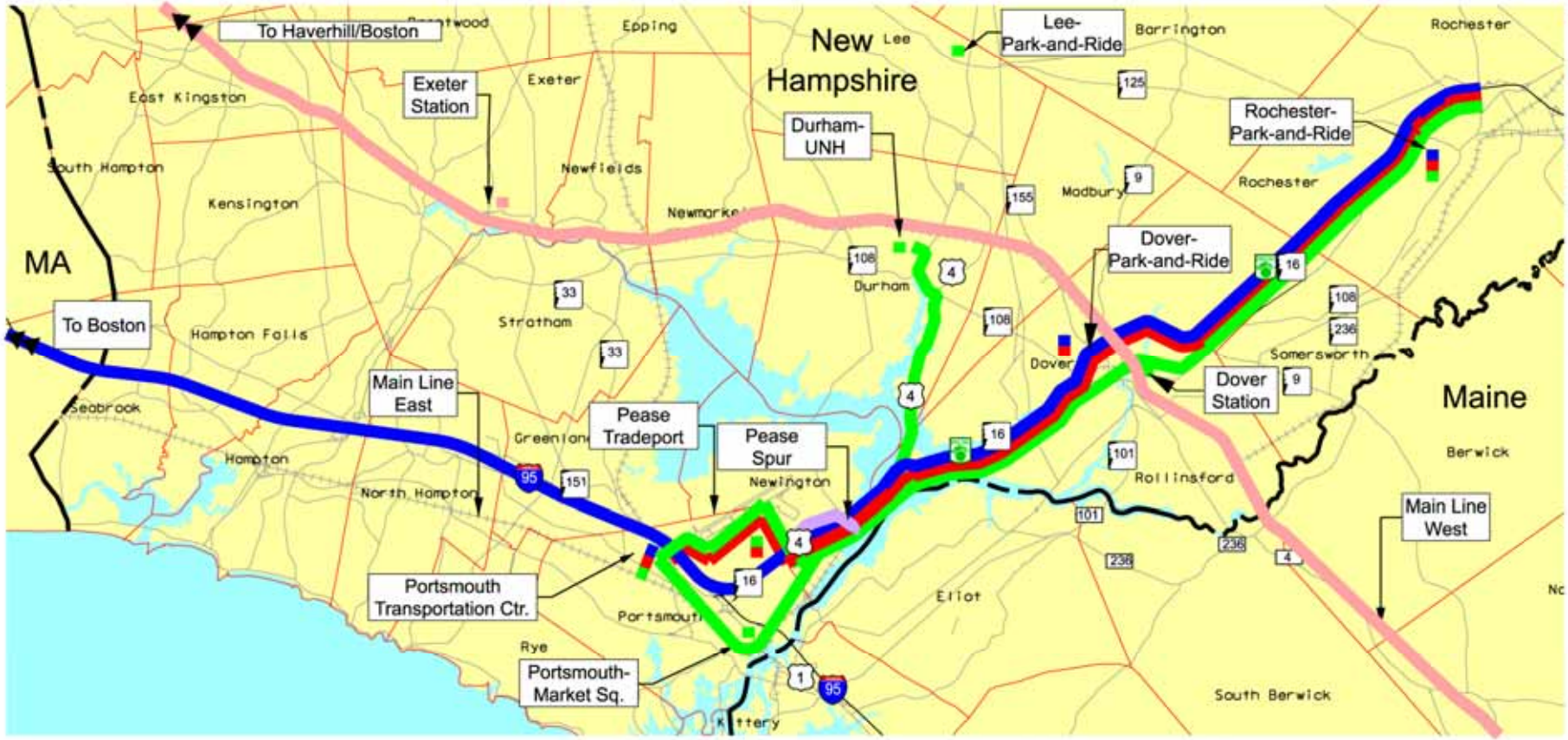

Emergency Access Gate SB On-Ramp
From Boston Harbor Road
Maintain Two SB Lanes on Mainline.
Create Standard One Lane On-Ramp
and Merge
BOSTON HARBOR RD
Restripe Shoulder Area
POMEROY
COVE
LEGEND

Travel Demand Management (TDM) Strategies

- Park and Ride Facilities
- Bus Service
- Rail Transportation
- Employer Based Measures

Bus and Rail Alternatives

New Hampshire DOT
Department of Transportation



Vanasse Hangen Brustlin, Inc

N

0 1.25 2.5 Miles

Date Created:&DATE$ &FILE$

Noise Evaluation and Proposed Noise Mitigation

NEPA Process

- NH DOT/FHWA Highway Noise Procedures
  - Determine Existing Conditions
  - Calculate Future Sound Levels
  - Determine Noise Impacts
  - Evaluate Noise Mitigation

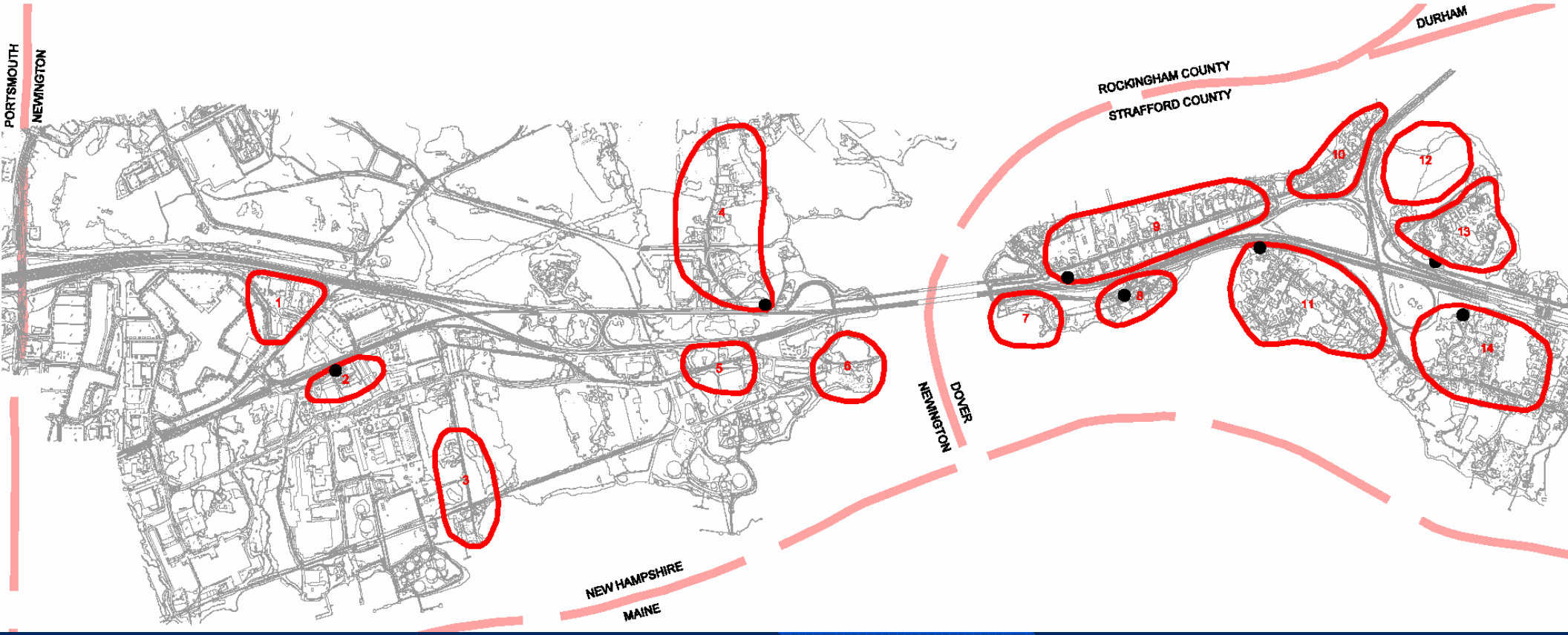
NH DOT Noise Impact Criteria

- Substantial Noise Increase
  - 15 dBA or Greater
- Noise Abatement Criteria
  - Residential 66 dBA

Noise Analysis Results

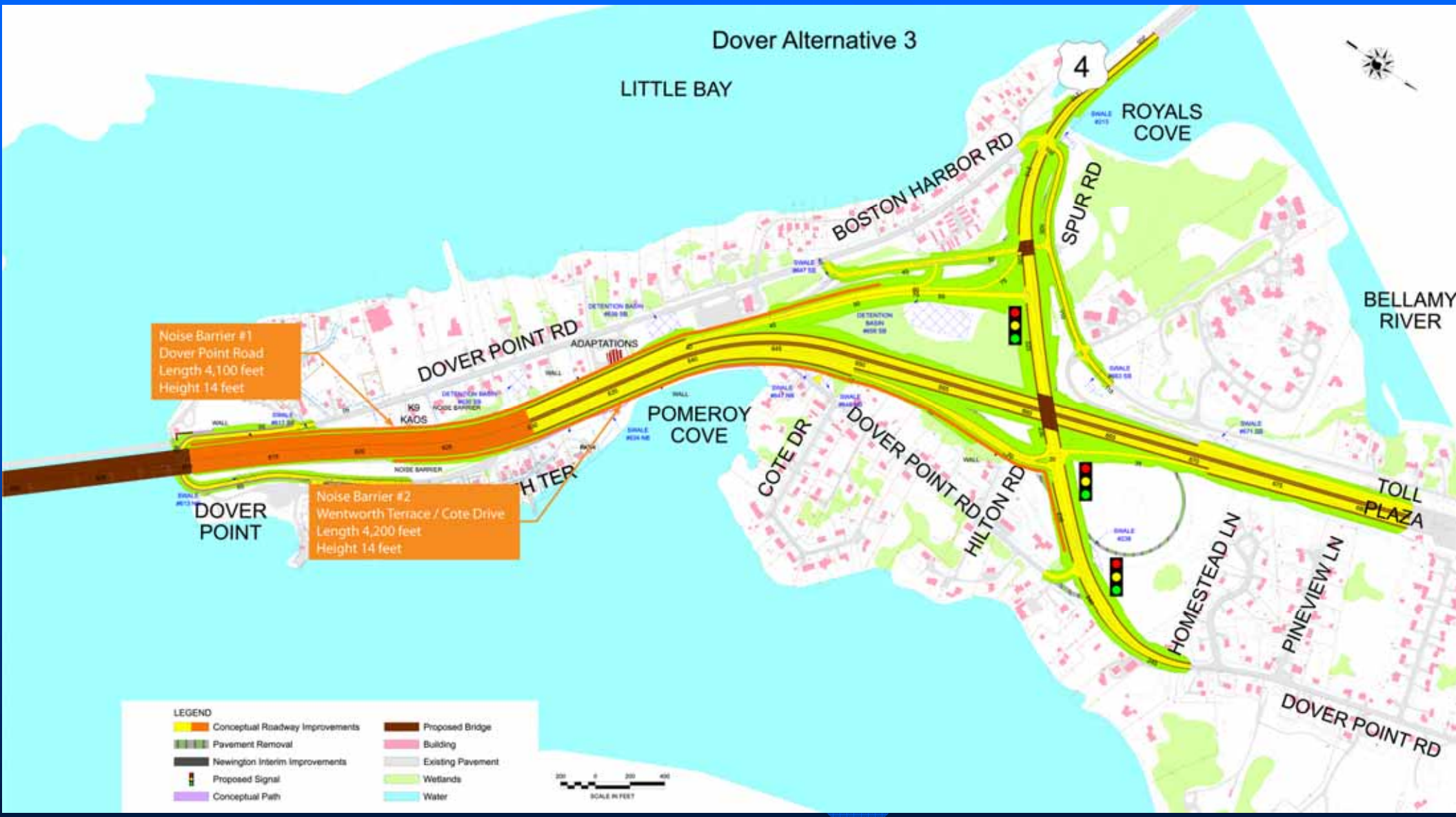
- Identified 14 noise sensitive areas
- Monitor existing noise and traffic levels (completed in October 2003)
- Calibrate existing conditions model (TNM 2.0)
- Predict future traffic and noise levels
- Identify mitigation measures per NH DOT and FHWA guidelines

Sensitive Receptor Locations



Noise Mitigation Measures Criteria

- Engineering
- Safety
- Acoustic Performance
- Cost Effectiveness
- Development vs Highway Timing
- Land Use
- Views of Impacted Receptors
  - Residents' Opinion of the Proposed Mitigation


Dover Alternative 3
LITTLE BAY
4
ROYALS COVE
BOSTON HARBOR RD
SPUR RD
BELLAMY RIVER
Noise Barrier #1
Dover Point Road
Length 4,100 feet
Height 14 feet
DOVER POINT RD
ADAPTATIONS
K9 KADS
POMEROY COVE
COTE DR
DOVER POINT RD
HILTON RD
TOLL PLAZA
DOVER POINT
Noise Barrier #2
Wentworth Terrace / Cote Drive
Length 4,200 feet
Height 14 feet
HOMESTEAD LN
PINEVIEW LN
DOVER POINT RD
LEGEND
Conceptual Roadway Improvements
Pavement Removal
Newington Interim Improvements
Proposed Signal
Conceptual Path
Proposed Bridge
Building
Existing Pavement
Wetlands
Water
SCALE IN FEET

Dover Alternatives 2 and 3

Summary of Potential Wetland Impacts and Wetland Mitigation

Table 1. Summary of Permanent Wetland Impacts

Town	Spaulding Turnpike Improvements (#11238)	Exit 4 Interim Improvements (#11238C and E)	Exit 9 Park and Ride (#14287)	NH 155 Bridge Replacement/ Intersection (#12922)	Total (For Mitigation)
Newington	11.23	0.64	0	0	**11.87**
Dover	4.30	0	0.43	0	**4.73**
Madbury	0	0	0	1.30	**1.30**
Total	**15.53***	**0.64**	**0.43**	**1.30**	17.9*

Note: The impacts shown here for the Spaulding Turnpike Improvements and the Exit 9 Park and Ride are preliminary and may change as design proceeds.

Regulatory Framework

- State - NHDES Rules – Wt 800
  - Wetland mitigation: Avoid impacts, minimize impacts, compensate for lost wetland functions and values
  - Mitigate within same watershed where possible
  - Required ratios for creation, restoration, preservation
- Federal – ACOE – CWA Section 404
  - Cooperative review by EPA, USFWS, NMFS
  - Ratios not specified in this case
  - Preference for restoration, then preservation (creation in certain circumstances)

Identify Mitigation Parcels

- Develop GIS database to ID parcels
- Review published studies/inventories
- Consultations with local, state and federal agencies
- Field review potential sites

Proposed Package

Preferred Elements:

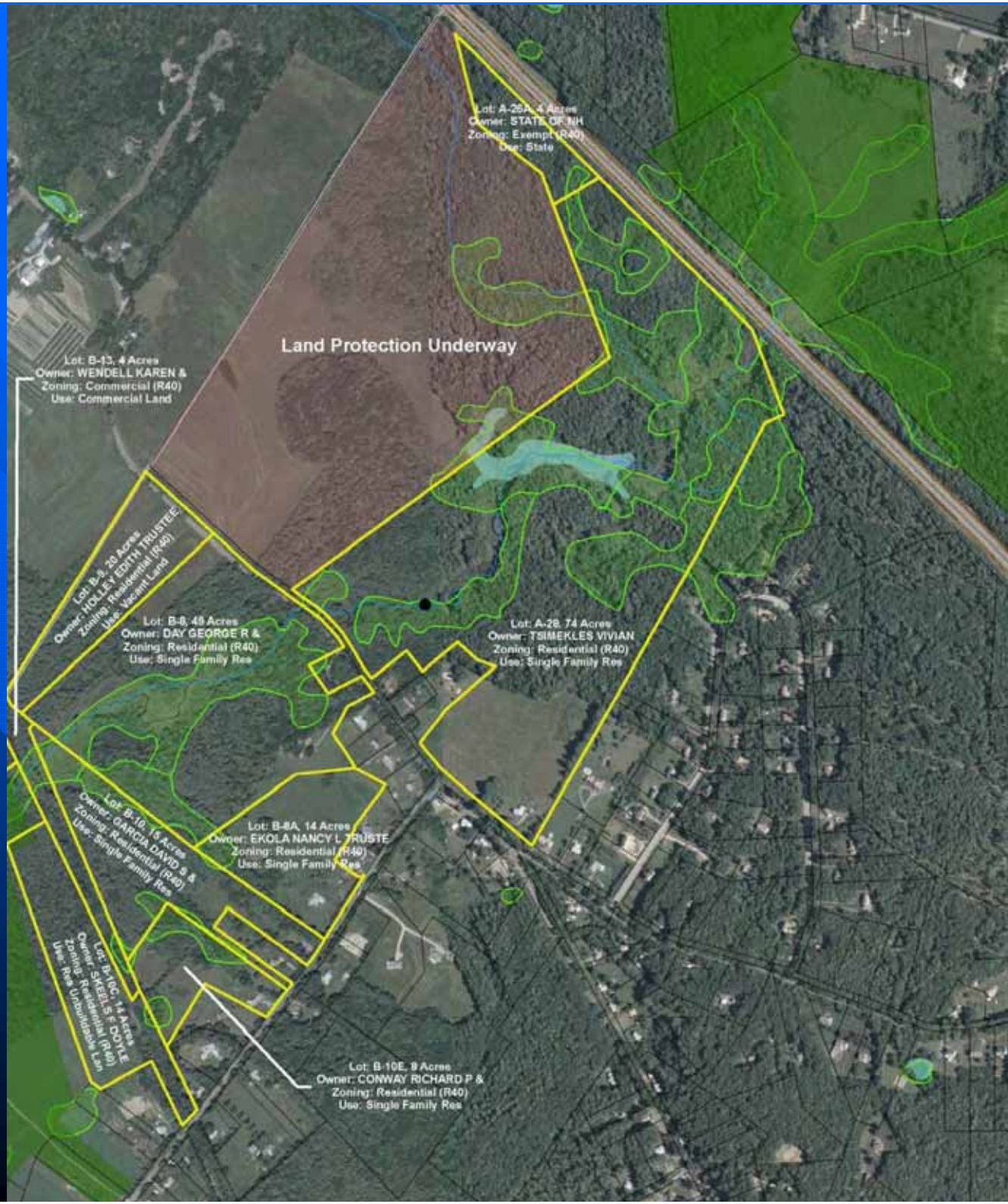
- Consider restoration of Railway Brook, Newington
- Preservation and restoration of the Drive-in Theater Parcel, Newington
- Preservation of 40 to 50 acres at Blackwater Brook, Dover

Alternative Elements:

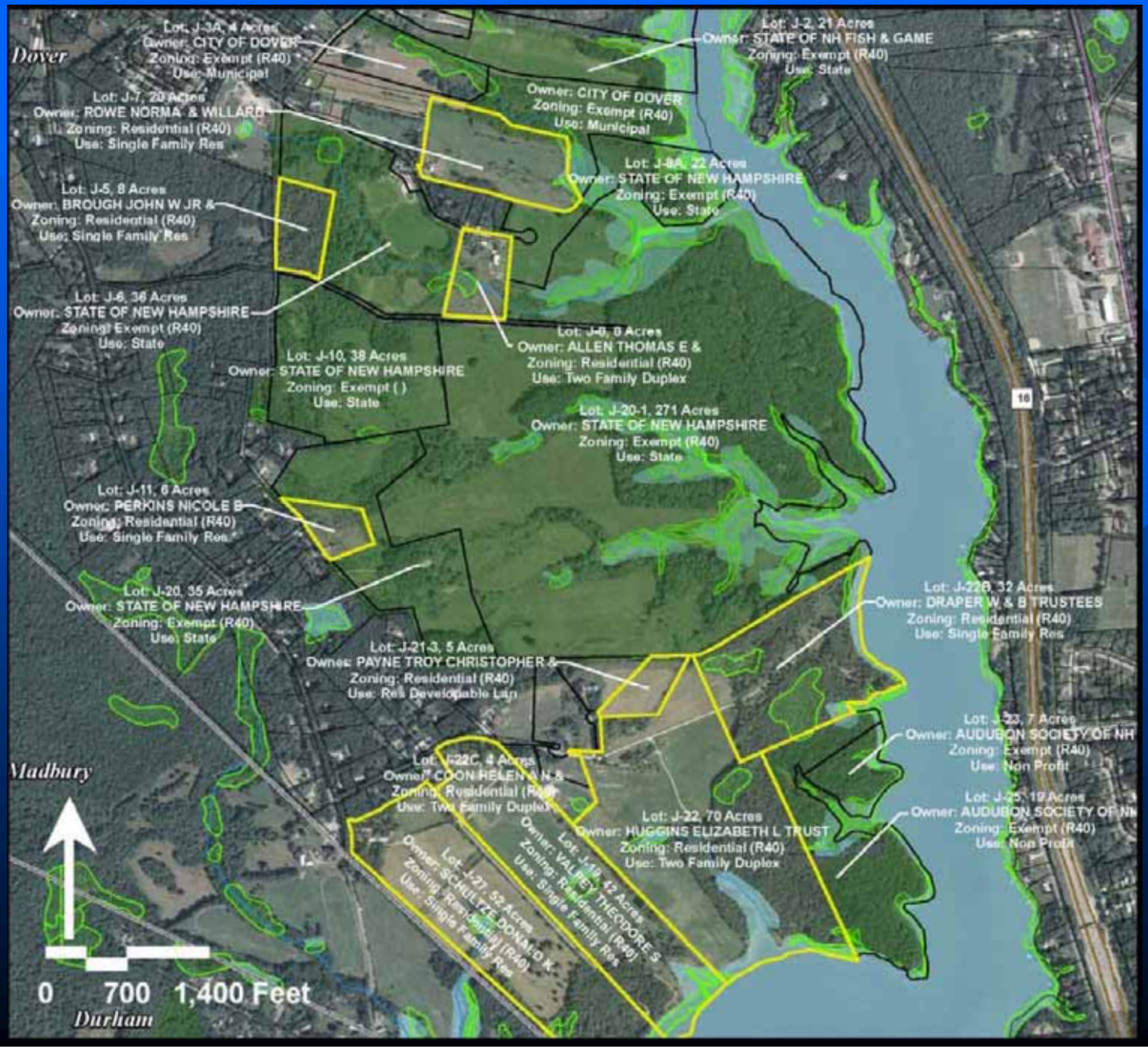
- Preservation of Watson Property, Newington
- Preservation of Knight Brook area, Newington
- Preservation at Bellamy River west area, Dover

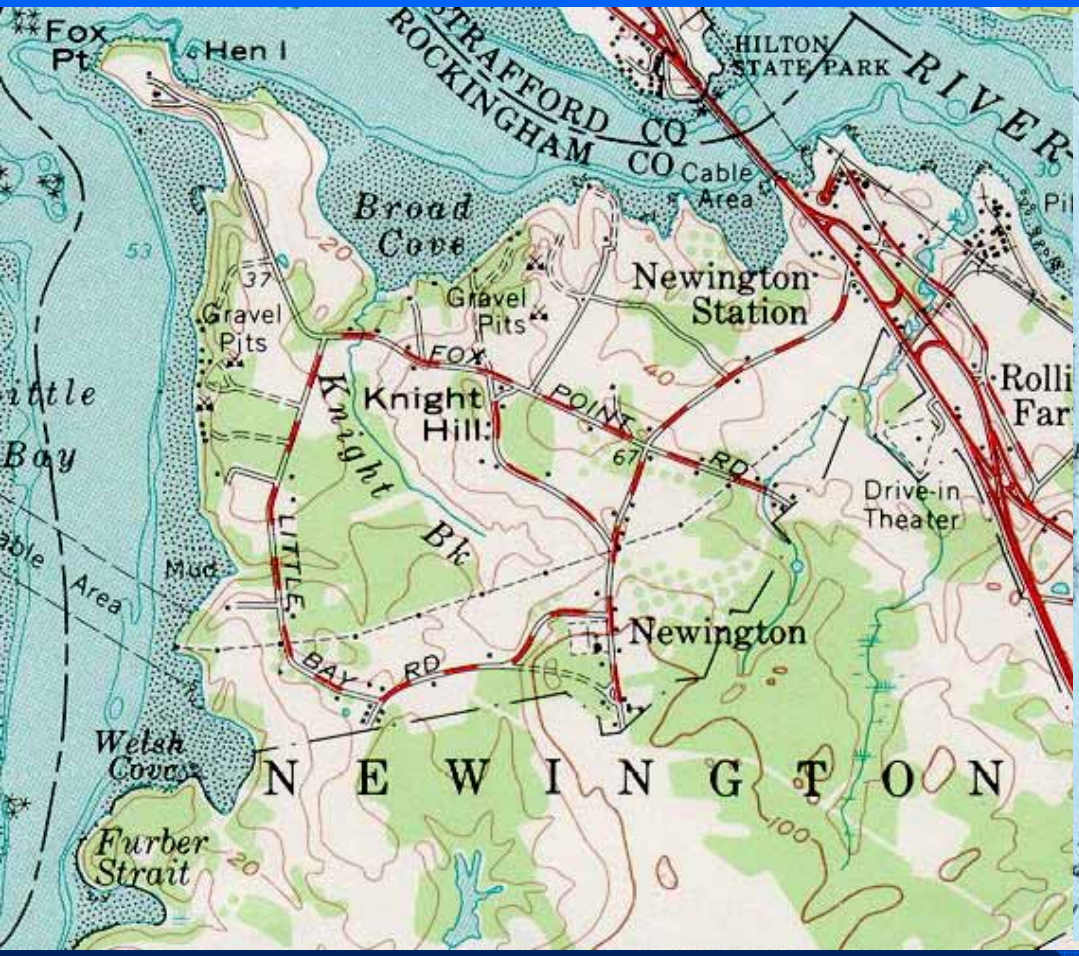
Blackwater Brook

- Key preservation site identified by Dover and TNC
- Undeveloped, variety of wetland/upland habitat
- Linked to adjacent conserved lands
- Potentially 50 acres conserved by NHDOT

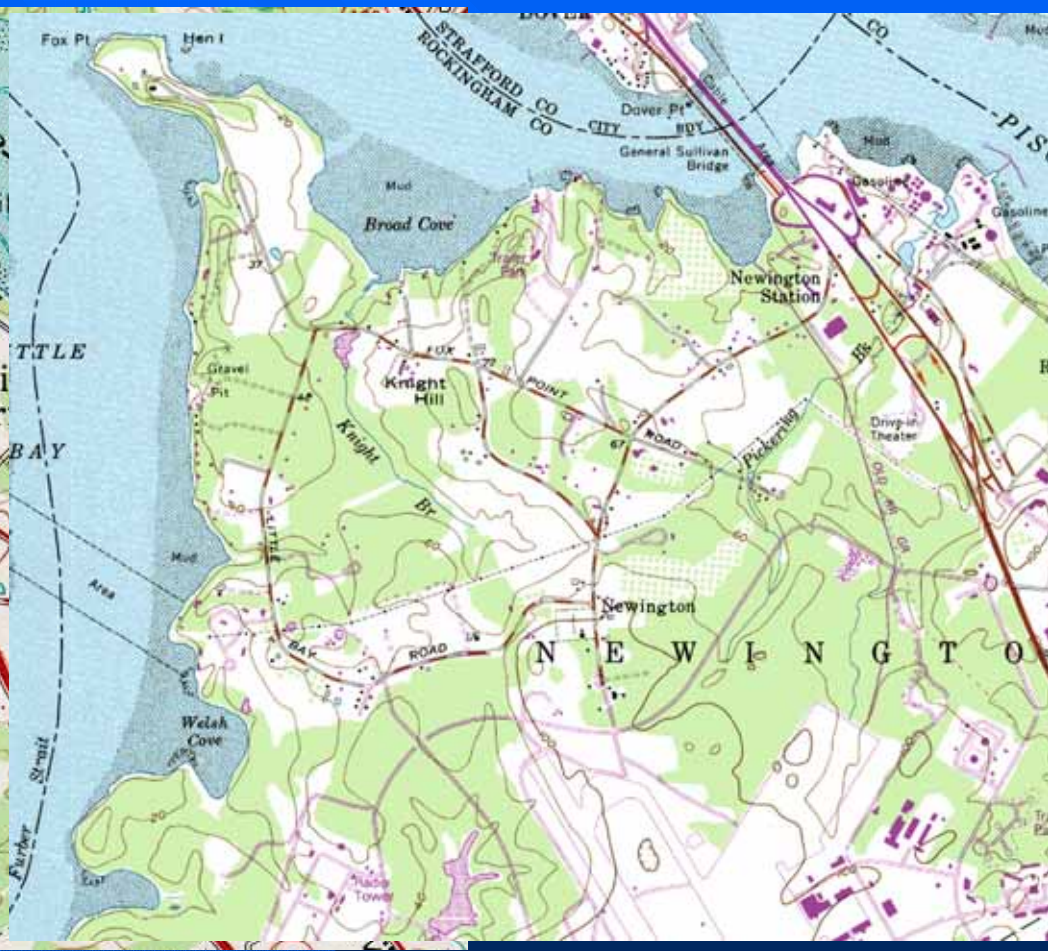


Dover Alternative: Bellamy River




Fox Pt
Hen I
STRAFFORD CO
ROCKINGHAM CO
HILTON STATE PARK
RIVER
Cable Area
Broad Cove
Gravel Pits
Gravel Pits
Newington Station
Knight Hill
FOX POINT RD
Knight Bk
LITTLE BAY RD
Drive-in Theater
Mud
Area
Newington
Welsh Cove
NEWINGTON
Furber Strait

1956


Fox Pt
Hen I
STRAFFORD CO
ROCKINGHAM CO
Dover Pt
General Sullivan Bridge
Broad Cove
Newington Station
Knight Hill
POINT ROAD
Pickering
Drive-in Theater
Newington
BAY ROAD
NEWINGTO
Welsh Cove
Furber Strait

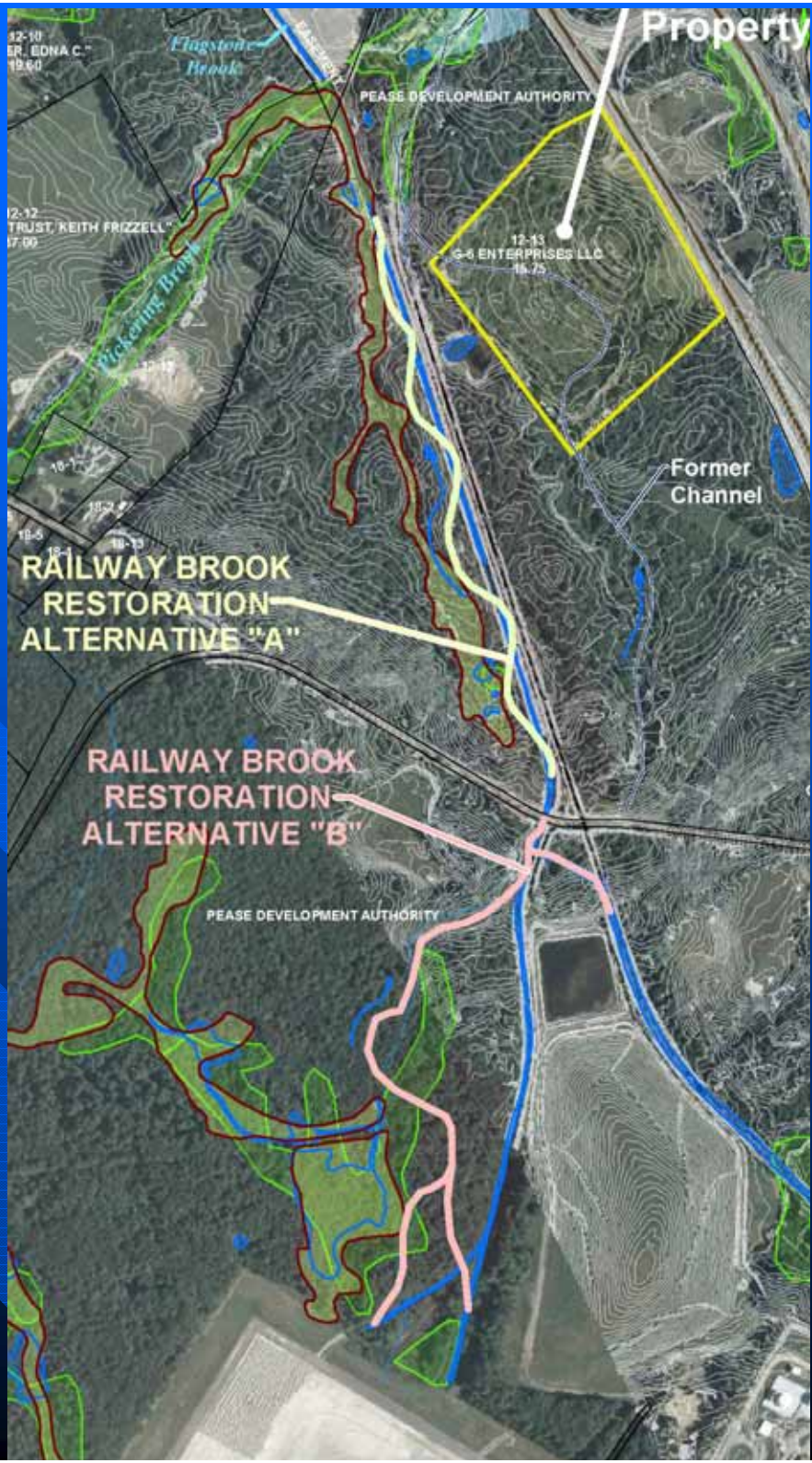
1986

Railway Brook

- High priority restoration opportunities
- Straightened channel, heavy sediment loads
- Adjacent lands provide important habitat
- Town-supported in principal

Drive-in Theater

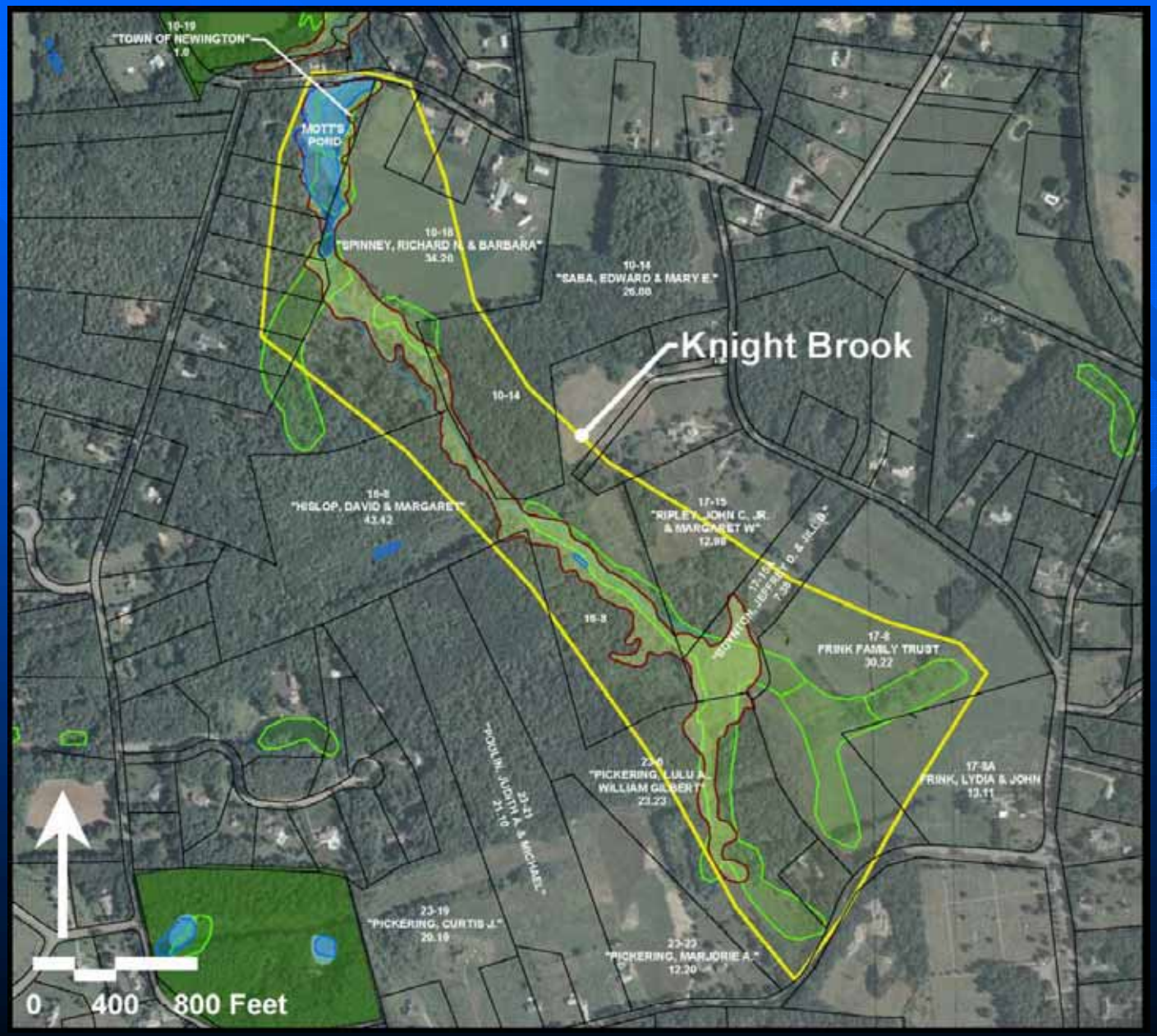
- Upland habitat restoration opportunities
- Additional 16 acres preservation



Newington Alternative: Watson Property

- 35 ac on Tricky's Cove
- Preservation would preserve intact upland adjacent to important tidal habitat

Newington Alternative: Knight Brook Preservation (75 ac)



Next Steps

- Follow-up with communities, landowners
- Develop formal proposal in DEIS
- File ACOE Individual Permit
- Final Environmental Impact Statement

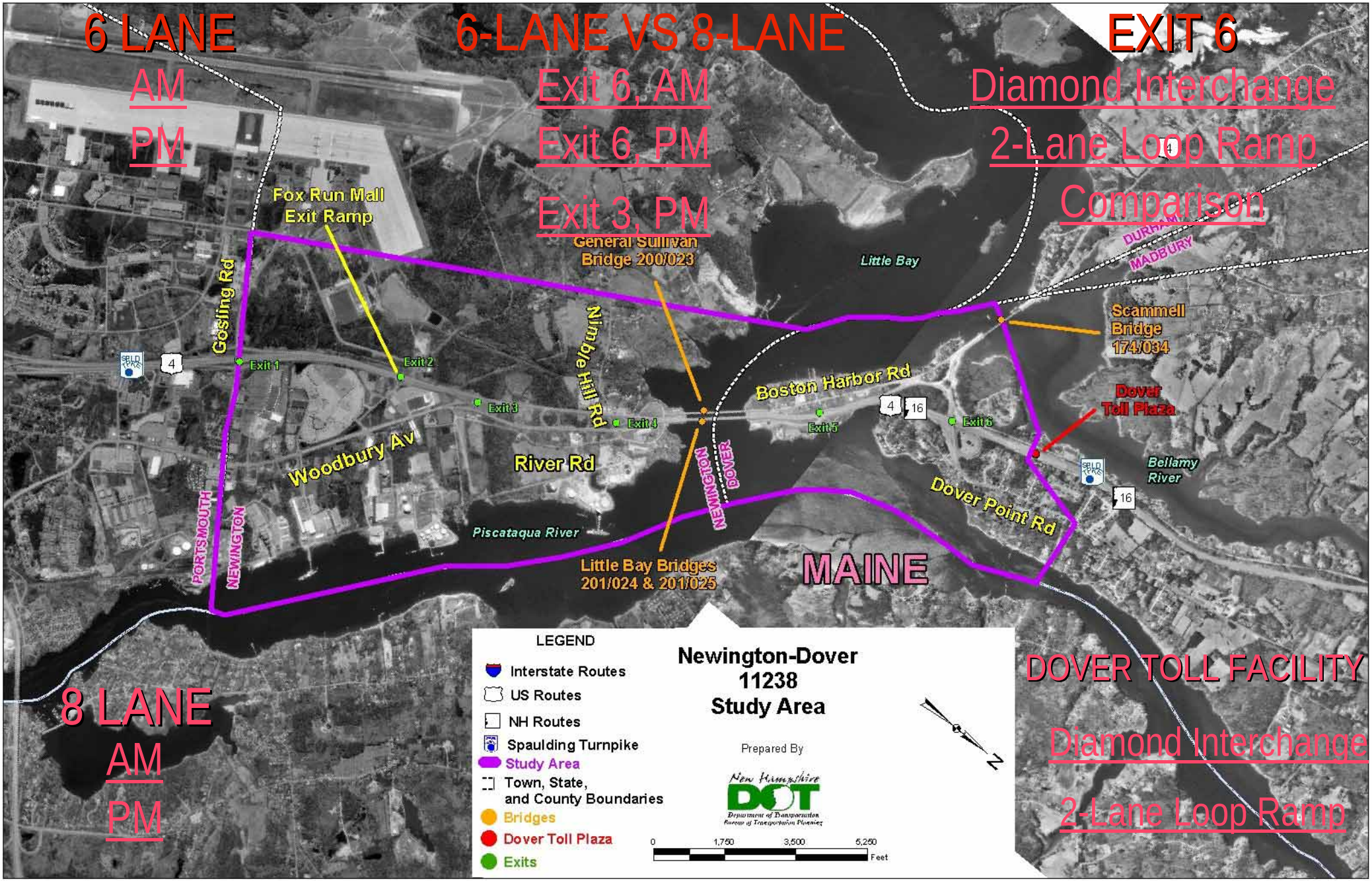
Contact Information

Christopher Waszczuk, PE
Project Manager
NH Department of Transportation
7 Hazen Drive, P.O. Box 483
Concord, NH 03302
Phone : (603) 271-6675

William Hauser
Administrator, Bureau of Environment
NH Department of Transportation
7 Hazen Drive, P.O. Box 483
Concord, NH 03302
Phone : (603) 271-3226

William O'Donnell, PE
Environmental Program Manager
Federal Highway Administration
19 Chenell Drive, Suite #1
Concord, NH 03301
Phone : (603) 228-3057 Ext. 101

THANK YOU
FOR
YOUR INTEREST

Open Discussion

Traffic Simulations